

CLAIMS

1. A data relay device for connecting to a network a plurality of kinds of data generating devices generating data in different formats, comprising:
5 a data receiving portion for receiving the data from the plurality of kinds of data generating devices; and
a converting portion for converting the data received by the data receiving portion into a common format that is processable by other devices on the network.
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2. The data relay device according to claim 1, further comprising
a connected device information storing portion for storing device information on the connected data generating devices, and
a device information updating portion for, when receiving from one of
15 the data generating devices data containing device information of the data generating device, making a comparison of the device information in the received data and the device information stored in the connected device information storing portion and updating a content of the connected device information storing portion according to a result of the comparison.
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3. The data relay device according to claim 2, further comprising a device information sending portion for sending the device information received from the data generating device to a data management device for processing the data from the data generating device via the network.
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4. The data relay device according to claim 1, further comprising
a conversion program storing portion for storing a conversion program for causing the converting portion to conduct a conversion processing according to the kind of each of the data generating devices, and
30 a conversion program obtaining portion for determining whether a conversion program for a data generating device is stored in the conversion program storing portion when the data generating device is newly connected and, if not, requesting the conversion program.
- 35 5. The data relay device according to claim 4, further comprising an analyzing portion for extracting a feature of the data received from the data generating device, thereby specifying the kind of the connected data

generating device.

6. A data management system in which, using a data relay device for connecting to a network a plurality of kinds of data generating devices
5 generating data in different formats, the data generating devices are connected to a data management device on the network, the data relay device comprising:

a data receiving portion for receiving the data from the plurality of kinds of data generating devices; and

10 a converting portion for converting the data received by the data receiving portion into a common format that is processable by other devices on the network;

wherein the data management device processes the data from the data generating devices in the common format.

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7. The data management system according to claim 6, wherein the data relay device further comprises

a connected device information storing portion for storing device information on the connected data generating devices, and

20 a device information updating portion for, when receiving from one of the data generating devices data containing device information of the data generating device, making a comparison of the device information in the received data and the device information stored in the connected device information storing portion and updating a content of the connected device
25 information storing portion according to a result of the comparison.

8. The data management system according to claim 7, wherein the data relay device further comprises a device information sending portion for sending the device information received from the data generating device to
30 the data management device via the network.

9. The data management system according to claim 6, further comprising a conversion program storing device for storing conversion programs for various kinds of the data generating devices,

35 wherein the data relay device further comprises

a conversion program storing portion for storing a conversion program for causing the converting portion to conduct a conversion

processing according to the kind of each of the data generating devices, and
a conversion program obtaining portion for determining whether a
conversion program for a data generating device is stored in the conversion
program storing portion when the data generating device is newly connected
5 and, if not, requesting the conversion program from the conversion program
storing device.

10. The data management system according to claim 9, wherein the data
10 relay device further comprises an analyzing portion for extracting a feature of
the data received from the data generating device, thereby specifying the
kind of the connected data generating device.

11. The data management system according to claim 9, wherein the
conversion program storing device further comprises an analyzing portion for
15 extracting a feature of the data received from the data generating device,
thereby specifying the kind of the connected data generating device.

12. The data management system according to claim 9, wherein the data
relay device sends the conversion program obtained from the conversion
20 program storing device to other data relay devices connected to the network.

13. The data management system according to claim 9, wherein the data
relay device periodically accesses the conversion program storing device and,
if a new conversion program is stored, obtains the conversion program and
25 stores it in the conversion program storing portion.